

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A computer-implemented method for modeling a target system, the method comprising:

identifying a first block that represents multiple component models in a block diagram model of a target system;

displaying a user interface in response to a first user action, the first user action indicating a selection of the first block, the user interface including a mechanism that provides the user with the multiple component models;

receiving a user selection that selects a first component model from the multiple component models;

incorporating the first component model into the model of the target system using the first block;

saving the model of the target system that includes the first component model in a memory; and

switching the first block to represent a second component model in response to a second user action indicating a selection of second component model in the user interface, without replacing the first block with a second block representing the second component model.

2. (Canceled)

3. (Previously Presented) The method of claim 1 wherein the component models belong to a category of atmosphere models that include at least a non standard day atmosphere model.

4. (Previously Presented) The method of claim 1 wherein the component models belong to a category of wind turbulence models that include at least a discrete turbulence model.

5. (Previously Presented) The method of claim 1 wherein the component models belong to a category of equations of motion models that include at least one simple variable mass model and at least one custom variable mass model.

6. (Canceled)

7. (Previously Presented) The method of claim 1 wherein component models provided as options of the user interface may be extended by a user.

8. (Previously Presented) The method of claim 1 wherein after the second component model is selected in the user interface, the second component model is incorporated into the model of the target system through the first block.

9. (Previously Presented) The method of claim 1 wherein the first component model has a same configuration of external ports that can be of input or output type as the second component model.

10. (Previously Presented) The method of claim 1 wherein the first component model has a different configuration of external ports that can be of input or output type as the second component model.

11. (Previously Presented) The method of claim 1 wherein the first block represents one of the first component model and the second component model depending on a user's selection of the first component model and the second component model.

12. (Canceled)

13. (Previously Presented) A computer-implemented method for modeling a target system , the method comprising:

identifying a first block that represents multiple component models in a block diagram model of a target system;

displaying a user interface in response to a user action indicating a selection of the first block, the user interface including a mechanism that provides the user with the multiple component models; and

receiving a user selection that selects a first component model from the multiple component models;

incorporating the first component model into the model of the target system using the block;

saving the model of the target system that includes the first component model in a memory;

switching the first block to represent a second component model in response to a user action indicating a selection of the second component model in the user interface; and

incorporating the second component model into the model of the target system by one of copying or referring to the second component model in the block, conditionally evaluating at least a part of the component model, or executing a sequence of modifications to the component model.

14. (Canceled)

15. (Previously Presented) The method of claim 13 wherein the component models belong to a category of atmosphere models that include at least a non standard day atmosphere model.

16. (Previously Presented) The method of claim 13 wherein the component models belong to a category of wind turbulence models that include at least a discrete turbulence model.

17. (Previously Presented) The method of claim 13 wherein the component models belong to a category of equations of motion models that include at least one simple variable mass model and at least one custom variable mass model.

18. (Canceled)

19. (Previously Presented) The method of claim 13 wherein component models provided as options of the user interface may be extended by a user.

20. (Previously Presented) The method of claim 13 wherein after the second component is selected in the user interface, the second component model is incorporated into the model of the target system through the first block.

21. (Previously Presented) The method of claim 13 wherein the first component model has a same configuration of external ports that can be of input or output type as the second component model.

22. (Previously Presented) The method of claim 13 wherein the first component model has a different configuration of external ports that can be of input or output type as the second component model.

23. (Previously Presented) The method of claim 13 wherein the first block represents one of the first component model and the second component model depending on a user's selection of the first component model and the second component model.

24. (Previously Presented) The method of claim 13 wherein the first component model is switched to the second component model without replacing the first block by a second block representing the second component model.

25-96. (Canceled)